



<b>Classification:</b>  Mechanical Engineer – Limited Term	<b>Position No.</b>  5800-3583-001
<b>CBID:</b>  R09	<b>Office:</b>  Energy Efficiency Research Office
<b>Date Prepared:</b>  September, 2014	<b>Division:</b>  Energy Research and Development
<b>KEY: (E) IS ESSENTIAL, (M) IS MARGINAL</b>	

Under the general direction and supervision of the Energy Commission Supervisor II in the Energy Efficiency Research Office, the incumbent provides mechanical engineering support to the Industrial, Agriculture, and Water (IAW) team. As such, the incumbent develops, implements, and administers electricity and natural gas-based energy research, development, and demonstration (RD&D) efforts related to IAW projects with the goal of advancing science and technologies not adequately addressed by the competitive or regulated markets. The incumbent performs a wide variety of mechanical engineering assignments, such as reviewing and/or preparing engineering studies or evaluations related to energy systems, technologies and practices; reviewing specifications, designs and proposals; and calculating and estimating energy savings, project economics and environmental benefits (e.g., greenhouse gas reductions). The incumbent conducts detailed field inspections during project construction and installations.

The incumbent performs responsible and complex mechanical engineering analyses to support energy RD&D funding; manages RD&D projects; and consults with mechanical engineers and other experts in the field.

### **WORKING CONDITIONS:**

The work is performed in an indoor office and meeting room setting involving sitting, standing, and walking. The candidate must work well with people inside and outside the Energy Commission, including members of the general public. Travel is required to conduct detailed field inspections of projects and assessment of mechanical installations, and to attend workshops, hearings and meetings. Additional hours beyond an eight-hour workday or forty-hour workweek may be required. While performing the duties described below, the incumbent will be required to work alone and/or in a team environment; use a personal computer and appropriate Energy Commission software such as word processing, electronic mail and Internet; and participate in and lead meetings with other staff and with other agencies.

### **DUTIES AND RESPONSIBILITIES:**

50% Technology assessment. The incumbent reviews and/or prepares engineering studies or evaluations related to energy systems, technologies and practices; evaluates or performs calculations to determine energy savings and project costs; conducts detailed engineering assessments and analyses of new, innovative and emerging energy efficiency technologies to determine their impact in reducing energy use and greenhouse gas emissions; and identifies and recommends RD&D activities associated with mechanical systems. The incumbent may perform one or more complex engineering evaluations relating to mechanical system performance including but not limited to the following: fluid flow, heat transfer, mechanical methods of power and material transmission, thermodynamics, pump analysis, mass and energy balances, environmental controls, material selection and specifications, performance and suitability of components, efficiency and economics of engineering design options, cost, and performance,



and the RD&D requirements relating the development and deployment of these technologies. The incumbent will read and interpret plans, drawings, specifications and regulations governing mechanical equipment/systems, including electric motors and procedures of IAW projects as it relates to the installation of mechanical equipment. The incumbent also provides technical assistance to other staff in analyzing engineering problems. (E)

- 30% Project management. The incumbent serves as the project manager for complex research projects with engineering tasks. As such, the incumbent will be responsible for all phases of project management, such as: a) prepare work statements, budgets, schedules, and contract amendments; b) identify measurable technical and economic objectives to determine project success; c) maintain technical and business relationships with the contractor; d) review monthly progress reports and prepare an evaluation of the project and brief management, as needed; e) inspect projects to ensure they meet technical, fiscal, and administrative objectives; and f) review and approve contractor invoices. (E)
- 10% Proposal evaluation. The incumbent participates in a technical scoring committee and provides his/her mechanical engineering expertise in reviewing proposals to determine how well the project addresses the scope of the solicitation criteria. Examples include the extent the project will: a) advance science or technologies not adequately provided by the regulated and competitive markets, b) have projected benefits and energy savings that are consistent with engineering laws and principals, c) address market issues and needs and the resulting impact on the marketplace, and d) have a likelihood of success based on adequate project budget and identified staff resources. The incumbent prepares written findings of such evaluations for use by a technical scoring committee. (E)
- 5% Consult with stakeholders. The incumbent consults with research organizations, federal and state government agencies, utility representatives and other technical experts to identify RD&D opportunities for alternative and advanced energy systems or technologies in California. Through on-going discussions and interactions with market stakeholders, the incumbent defines, develops and implements projects that provide significant public benefits to California and meet the policy and technical objectives of the Energy Commission's RD&D Program. (M)
- 5% Other duties as required consistent with the specification of this classification. (M)

SIGNATURES	
I Certify That I Am Able To Perform, With Or Without The Assistance Of A Reasonable Accommodation, The Essential Job Duties Of This Position	
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Incumbent _____ Date _____ Mechanical Engineer – Limited Term	Colin Corby _____ Date _____ Energy Commission Supervisor II (TED)